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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,451	08/10/2001	Takao Uehara	S-2490	4601

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EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 03/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

09/925,451

UEHARA ET AL.

Examiner

Art Unit

Callie E. Shosho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION****Claim Rejections - 35 USC § 102**

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 10158336 or Simms (U.S. 4,219,632).

Pending translation, and using machine translation, it is noted that JP 10158336 discloses additive for paint which is a copolymer obtained from 30-80% C<sub>2</sub>-C<sub>22</sub> alkyl (meth)acrylate and 20-70% 2-isocyanatoethyl methacrylate (claims 4 and 9, paragraphs 7-9 and 25).

Alternatively, Simms discloses additive for paint that is a copolymer obtained from 25-75% C<sub>2</sub>-C<sub>22</sub> alkyl (meth)acrylate and 25-75% 2-isocyanate ethyl methacrylate (col.1, lines 7-10 and 50-64 and example 1).

In light of the above, it is clear that JP 10158336 or Simms anticipate the present claims.

3. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Turpin et al. (U.S. 4,608,314).

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Turpin et al. disclose additive for paint that is a copolymer obtained from at least 5% m-isopropenyl- $\alpha$ - $\alpha$ -dimethylbenzyl isocyanate and 30-95% alkyl (meth)acrylate (col.2, lines 42-63, col.3, lines 40-53, col.4, lines 7-9 and 23-24, and col.11, line 49).

In light of the above, it is clear that Turpin et al. anticipate the present claims.

4. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Cassatta et al. (U.S. 4,533,681) or EP 610534.

Cassatta et al. disclose copolymer obtained from 0.5-20% isocyanatoethyl methacrylate, 0.5-20% hydroxyalkyl methacrylate, and 60-90% alkyl methacrylate (col.2, lines 51-66, col.8, lines 57-63, and col.9, lines 20, 25-26, and 54-65).

Alternatively, EP 610534 discloses additive for paint that is a copolymer obtained from 5-40% isocyanatoethyl methacrylate and 0-80% alkyl (meth)acrylate (page 2, lines 35-43 and 54-56, page 3, lines 5-10, and claim 2).

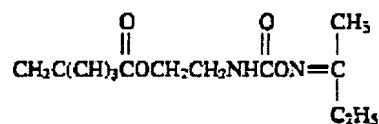
In light of the above, it is clear that Cassatta et al. or EP 610534 anticipate the present claims.

5. Claims 1 and 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamura et al. (U.S. 5,576,406).

Yamamura et al. disclose paint comprising copolymer obtained from monomers comprising alkyl (meth)acrylate and reactive monomer having a group derived from isocyanate group (col.1, lines 17-20, col.2, lines 1-5 and 32-36, and col.3, lines 7-8 and 32). Attention is

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drawn to example 13 which discloses copolymer obtained from 57.5% (115/200) alkyl (meth)acrylate and 32.5% (65/200) monomer of the formula:



which is 2-(0-[1-methyl-propylideneamino]carboxyamino)ethyl methacrylate as presently claimed.

In light of the above, it is clear that Yamamura et al. anticipate the present claims.

### **Claim Rejections - 35 USC § 103**

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10158336, Simms (U.S. 4,219,632), Turpin et al. (U.S. 4,608,314), Cassatta et al. (U.S. 4,533,681), and EP 610534 any of which in view of Franchina (U.S. 6,479,605).

The disclosures with respect to JP 10158336, Simms, Turpin et al., Cassatta et al., and EP 610534 in paragraphs 2-4 above are incorporated here by reference.

The difference between JP 10158336, Simms, Turpin et al., Cassatta et al., and EP 610534 and the present claimed invention is the requirement in the claims that the copolymer is obtained from specific reactive monomer.

Franchina et al. disclose the use of copolymer obtained from blocked isocyanate such as 2-(0-[1-methyl-propylideneamino]carboxyamino)ethyl methacrylate in order to promote durability (col.5, lines 38-50 and col.6, lines 1-12).

In light of the motivation for specific monomer disclosed by Franchina, it therefore would have been obvious to one of ordinary skill in the art to use such monomer in the

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copolymer of JP 10158336, Simms, Turpin et al., Cassatta et al., and EP 610534 in order to impart durability, and thereby arrive at the claimed invention.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

EP 694564 discloses acrylate latex polymer, however, there is no disclosure that the polymer is obtained from reactive monomer having isocyanate group or an isocyanate derived group.

Brixius et al. (U.S. 4,446,175) disclose paint comprising copolymer obtained from isocyanatoethyl (meth)acrylate, alkyl acrylate, and mercaptan.

WO 93/03070, similar to EP 610534, discloses copolymer obtained from monomer containing isocyanate group and monomer having no functional group capable of undergoing reaction with the isocyanate group.

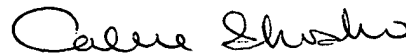
Simonet et al. (U.S. 5,015,711) disclose copolymer obtained from monomer with carboxyl functionality, monomer with no carboxyl functionality, and surfactant monomer, which is obtained by reacting isocyanatoethyl methacrylate and surfactant. There is no disclosure of the amounts of isocyanatoethyl methacrylate and surfactant utilized.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Callie E. Shosho

Examiner

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February 28, 2003